What is claimed is:

1. A process for obtaining crude 1,3-butadiene by extractive distillation with a selective solvent from a C_4 cut comprising C_4 acetylenes as secondary components in a dividing wall column (TK) having a bottom evaporator (V1), in which a dividing wall (T) is disposed in the longitudinal direction of the column to form a first subregion (A), a second subregion (B) and a lower combined column region (C), and which is disposed upstream of an extractive wash column (K), which comprises controlling the energy input into the dividing wall column (TK) via the bottom evaporator (V1) in such a way that a bottom stream (17) is drawn off from the dividing wall column (TK) and comprises solvent laden with the C_4 acetylenes whose proportion of 1,3-butadiene is restricted such that the loss of 1,3-butadiene is economically acceptable, and feeding the bottom stream (17) to an acetylenes outgasser (AG) and, in the acetylenes outgasser (AG), stripping out the C_4 acetylenes overhead and obtaining purified solvent as the bottom stream (27).

2. The process according to claim 1, wherein the proportion of 1,3-butadiene in the bottom stream (17) of the dividing wall column (TK) is restricted to a maximum of from 0.1 to 2 times the proportion of C_4 acetylenes.

3. The process according to claim 2, wherein the proportion of 1,3-butadiene in the bottom stream (17) of the dividing wall column (TK) is restricted to 0.3 times the proportion of C_4 acetylenes.

4. The process according to any of claims 1-3, wherein the energy of the bottom stream (17) of the dividing wall column (TK) is utilized for indirect heat exchange with the bottom stream (27) of the acetylenes degasser and/or with the liquid which is drawn off from one or more separation stages in the lower combined column region C of the dividing wall column, and the separation stage from which the liquid is drawn off is selected in such a way that the energy demand for the dividing wall column (TK) is minimal.

5. The process according to any of claims 1-4, wherein the heat content of the bottom stream (27) of the acetylenes outgasser (AG) is utilized for indirect heat exchange with the liquid which is drawn off from one or more separation stages in the lower combined column region (C) of the dividing wall column, and the separation stage(s) from which the liquid is drawn off is/are determined in such a way that the energy demand for the dividing wall column (TK) is minimal, and/or that

the heat content of the bottom stream (27) is utilized for indirect heat exchange with the C_4 cut (1) to be separated which is fed to the dividing wall column (TK).

6. The process according to any of claims 1-5, wherein thermally coupled columns are used instead of the dividing wall column (TK).

7. The process according to any of claims 1-6, wherein

- the C_4 cut (1) is fed to the first subregion (A) of the dividing wall column (TK), preferably into its middle region,

- the top stream (2) from the first subregion (A) of the dividing wall column (TK) is fed to the extractive wash column (K), into its lower region,

- in the extractive wash column (K), a countercurrent extraction is carried out by charging with a first substream (3) of the selective solvent in the upper region of the extractive wash column (K),

- the components of the C_4 cuts having lower solubility than 1,3-butadiene in the selective solvent are drawn off (4) via the top of the extractive wash column (K),

- the bottom stream (7) from the extractive wash column (K) is recycled into the upper region of the first subregion (A) of the dividing wall column (TK),

- a second substream (13) of the selective solvent is fed to the dividing wall column (TK) in the upper region of the second subregion (B),

- the top product (14) from the second subregion (B) of the dividing wall column (TK) is drawn off as crude 1,3-butadiene (16) and

- a bottom stream (17) consisting of solvent laden with the C_4 acetylenes, whose proportion of 1,3-butadiene is restricted such that the loss of 1,3-butadiene is economically acceptable, is drawn off from the lower combined column region (C) of the dividing wall column (TK),

- the bottom stream (17) is fed to the acetylenes degasser (AG) in which the C_4 acetylenes are stripped out overhead and purified solvent is obtained as the bottom stream (27) and is recycled into the process.

8. The process according to any of claims 1-7, wherein the temperature in the bottom evaporator (V1) of the dividing wall column (TK) is controlled to a value in the range from 50 to 210°C, preferably to 178°C, and the top pressure of the second subregion (B) of the dividing wall column (TK) to a value in the range from 1 to 10 bar absolute, preferably to a value in the range from 2 to 5 bar absolute, more preferably to 3.5 bar absolute, and the top pressure in the acetylenes outgasser (AG) to a value in the range from 1 bar absolute to a maximum of the bottom pressure in the dividing wall column (TK).

9. The process according to any of claims 1-8, wherein the acetylenes outgasser (AG) is integrated by construction into the lower combined column region (C) by configuring the number of theoretical plates in the lower combined column region (C) to a correspondingly larger value and incorporating a gas-tight division in the dividing wall column (TK) at the point which corresponds to the upper end of the acetylenes outgasser (AG) integrated into the lower combined column region (C).